5. (New) A process for manufacturing a thermoinsulating flexible mat of mineral fibers having a quasi-random orientation, comprising the steps of:

producing an initial felt of fiber material comprising fibers a majority of which have a diameter between 2.5 and 4.5 micrometers and a length of 2 to 15 centimeters;

a first step of longitudinal compression of the initial felt to produce a felt having an undulated fiber structure;

a second step of longitudinal compression of the felt having the undulated fiber structure to produce a compressed mat having a random arrangement of the fibers,

wherein the compressed mat has a density not greater than $40kg/m^3$.

6. (New) The process of Claim 5 wherein the longitudinal compression in said first step is performed by conveyors having a speed ratio of 2.5:1.

7. (New) The process of Claim 6 wherein the longitudinal compression in said second step is performed by conveyors having a speed ratio of 2.5:1.

REMARKS

Favorable reconsideration of the present application is respectfully requested.

New Claims 5-7 have been introduced. Claims 1-3 and 5-7 are active in the application.

Claim 1 has been amended to recite that the doubly crimped fibers of the thermoinsulating flexible matter are formed by a first step of producing a felt of an undulating fiber structure and a second step of producing a random arrangement of the fibers. This is shown by the undulations illustrated at zone IIa in the figure, and the random arrangement shown at zone IIIa in the figure. New Claim 5 is a method claim which also recites the two

crimping steps, while Claims 6 and 7 recite the speed ratios described in the first two paragraphs of page 5.

Claim 1 now differs from that which the Board of Appeals had confirmed was unpatentable over Debouzie et al in the parent application. Specifically, Claim 1 had not recited that the double crimped fibers are formed by a first step of producing a felt of an undulating fiber structure and a second step of producing a random arrangement of the fibers, and so the Board had not addressed the patentability of a claim reciting this feature. In fact, the first step of the process according to the present invention produces a crimping effect and undulation of the felt to create a very low density product of very fine fibers. The second step destroys the crimped structure of the intermediate product and produces a randomly oriented fiber structure with low density.

Applicants respectfully submit that amended Claim 1 clearly defines over Debouzie. The process described by Debouzie et al is intended to produce products with high compression ratios, but without the formation of creases (col. 2, line 39), wherein the products exhibit a fiber orientation, which if not isotropic then at least is more than random.

This is done by a process including multiple stages of compression and limiting the compression imposed at each of the stages (col. 4, line 14) in such a way that no crease is formed at any stage of the longitudinal compression.

From the description of the detailed embodiment on column 10 of Debouzie et al, one can make following calculation of the longitudinal compression ratio.

Speeds		Speed ratio with preceding step preceding step
Felt formation (see col. 10, 1. 14)	30 m/min	
Vertical compression at conveyors 7-8 see col.l 0, 1.16 in connection with 1.38)	35 m/min	substantially the same
First longitudinal compression at conveyors 9-10 (see col. 10,1.40)	18-20 m/min	1.75 - 1.94
Second longitudinal compression at conveyors 11-12 (see col.10, 1.4 which contains a clerical error, the correction of which is evident from col. 10,1.21 because the speed in the oven acid downstream cannot be higher than the upstream speed, thus figure "1" as a lower limit was certainly intended to be "7")	7-10 m/min	1.80 - 2.86

As is evident from this comparison, the first step of the inventive process produces an actual crimping effect, which produces an undulated structure in which the initial felt is a very low density product with very fine fibers.

Such effect is absolutely not taught by Debouzie et al., who clearly state that any crimping (meaning crease formation) is to be avoided, and is actually avoided with then process.

Claim 1 therefore clearly defines over this reference. Since Claim 5 also recites the first and second crimping steps, this claim and its dependent claims also define over Debouzie.

Finally, since Claims 6 and 7 require that the conveyors have a speed ratio of 2.5 to 1, and this is not true for the two steps of Debouzie (see Table above), the dependent claims are believed to define over this reference for this reason as well.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early notice of allowability.

Respectfully submitted,

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IN THE CLAIMS

Please amend Claim 1 as follows:

--1. (Amended) Thermoinsulating flexible mat of mineral fibers having a substantially random orientation, comprising doubly crimped fibers, a majority of which have a diameter between 2.5 and 4.5 micrometers and a length of 2 to 15 centimeters, wherein the mat has a density not greater than 40 kg/m^3,

wherein the doubly crimped fibers are formed by a first step of producing a felt of an undulating fiber structure and a second step of producing a random arrangement of the fibers.--

Add the following new claims:

5-7 (New)